

## **ACCOMMODATION DEVICE FOR BLUETOOTH EARPHONE**

### **Field of the invention**

The present invention relates to an accommodation device for a bluetooth earphone and, more particularly, to a device making use of a receiving space in a bluetooth communication apparatus to accommodate a bluetooth earphone and simultaneously  
5 charge the bluetooth earphone through the bluetooth communications apparatus.

### **Background of the invention**

The bluetooth technology is a new open wireless communication standard, and lets desktop and notebook computers, personal digital assistants (PDAs), mobile phones,  
10 printers, scanners, digital still cameras and even electric appliances perform wireless short-range connection, with a range of 10 meters. The bluetooth technology has unlimited possibilities. In the not too distant future, photographs taken with a digital still camera will be wirelessly transmittable to a bluetooth mobile phone. With the addition of a few lines of text, the photographs can be made into electronic postcards  
15 and sent to relatives and friends via email. A bluetooth car kit can provide a more convenient handsfree function for safer car driving. Even when waiting in an airport lounge, one can print files on the closest printer or send files from a notebook computer to a printer via email. An electronic bluetooth car key on a mobile phone can even open car doors, and credit card information stored in a mobile phone and  
20 protected by a password and encryption function can be used to make payment and then receive an electronic receipt.

The bluetooth technology has been applied to wireless communication apparatuses matched with a bluetooth earphone. However, existent bluetooth mobile phones are bulkier while the bluetooth earphone is small. Therefore, the bluetooth earphone is  
25 difficult to find after it is stored, and may easily be lost. Besides, when it is necessary

to charge the bluetooth earphone, an external power source is required. In particular, two kinds of chargers must be taken when one goes out, which is inconvenient.

### **Summary of the invention**

The primary object of the present invention is to provide an accommodation device  
5 for a bluetooth earphone. The accommodation device makes use of a first groove and a second groove of a bluetooth communication apparatus. A first storage battery used by the bluetooth communication apparatus is received in the first groove. The bluetooth earphone is received in the second groove. This structure makes losing the bluetooth earphone more difficult.

10 Another object of the present invention is to provide an accommodation device for a bluetooth earphone in which the bluetooth earphone is connected to an earphone power source connector of the second groove and a charging device of the bluetooth communication apparatus. Therefore, when the bluetooth communication apparatus is being charged, the bluetooth earphone can be simultaneously charged.

15 Yet another object of the present invention is to provide an accommodation device for a bluetooth earphone in which the accommodation device provides a single structure that simultaneously charges the bluetooth communication apparatus and the bluetooth earphone, thus reducing the number of necessary chargers and facilitating use.

20 To achieve the above objects, a bluetooth communication apparatus of the present invention comprises a first groove and a second groove. A storage battery of the bluetooth communication apparatus is received in the first groove. The bluetooth earphone is received in the second groove. Therefore, the bluetooth earphone is easily found after storage because it has a fixed placement position.

25 Moreover, an earphone charging slot of the bluetooth earphone is connected to an



provided in the second groove 14. A charging slot 18 is connected on the shell 10, and is connected to a charging device 19 in the shell 10 and the earphone power source connector 26. A first storage battery 17 is placed in the first groove 12, and is connected to the charging device 19 via a power source connector 16 in the first groove 12. The first storage battery 17 is a Ni-Cd battery, a Ni-MH battery or a lithium battery.

The bluetooth earphone 2 is placed in the second groove 14 of the bluetooth communication apparatus 1, and comprises an earphone shell 22, an earphone charging slot 24 and a second storage battery 28. The earphone charging slot 24 is connected on the earphone shell 22, and is connected to an earphone charging device 27 in the earphone shell 22 and the earphone power source connector 26 in the bluetooth communication apparatus 1. The second storage battery 28 is placed in the earphone shell 22, and is connected to the earphone charging device 27. The second storage battery 28 is a Ni-Cd battery, a Ni-MH battery or a lithium battery.

As shown in Figs. 1, 3 and 4, the first storage battery 17 is placed in the first groove 12 of the bluetooth communication apparatus 1, and is shielded by a battery cover. The bluetooth earphone 2 is placed in the second groove 14 of the bluetooth communication apparatus 1. The earphone charging slot 24 is connected with the earphone power source connector 26 in the second groove 14. The bluetooth earphone 2 is shielded by a cover body 4. When the charging slot 18 of the bluetooth communication apparatus 1 is connected to a charger, the first storage battery 17 of the bluetooth communication apparatus 1 can be charged via the charging device 19. The bluetooth earphone 2 can also be connected with the earphone charging device 27 via the earphone power source connector 26 in the second groove 14 to charge the second storage battery 28.

To sum up, the present invention makes use of a bluetooth communication apparatus to provide a fixed placement space for a bluetooth earphone, hence solving the problem of easy loss of the bluetooth earphone in the prior art. Moreover, because the power sources of the bluetooth communication apparatus and the bluetooth  
5 earphone are connected together, when the bluetooth communication apparatus is being charged, the bluetooth earphone can be simultaneously charged, hence solving the prior art drawback of needing two charging cables.

Although the present invention has been described with reference to the preferred embodiment thereof, it will be understood that the invention is not limited to the  
10 details thereof. Various substitutions and modifications have been suggested in the foregoing description, and other will occur to those of ordinary skill in the art. Therefore, all such substitutions and modifications are intended to be embraced within the scope of the invention as defined in the appended claims.